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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VLAHOS, SOPHIA

ART UNIT

PAPER NUMBER

2611

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/726,371	Applicant(s) SUZUKI ET AL.	
	Examiner SOPHIA VLAHOS	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-67 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3 and 5-65 is/are allowed.
- 6) ☒ Claim(s) 1,66 and 67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 2/04/08 have been fully considered but they are not persuasive. Applicant argues (pages 32, 32 of "Remarks" section: "Therefore, Saito et al. do not teach or suggest a spreading code generation control section as defined by Applicant in Claim 1."

Examiner disagrees since Saito (U.S. 5,940,432) discloses the specific limitation of claim 1, "a spreading code control section which changes a shifting direction of the spreading code relative to the spread signal every time a peak is detected by said peak signal detecting section." Specifically, Saito teaches that every-time the digital data demodulator of Fig. 11, enters a clock tracking mode, and this happens every time a correlation peak is detected by block 824, (in the initial capturing section 82), a spreading code control section (the clock tracking section controls the VCO to change a shifting direction of the PN code out of code generator 84) which changes a shifting direction of the spreading code relative to the spread signal, see column 11, lines 61-67, column 12, lines 1-24 of Saito

For at least the above reason, the rejection of claims 1, 66 and 67 is maintained.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Saito et. al., (U.S. 5,940,432).

With respect to claim 1, Saito et. al., disclose: a spreading code generating section which generates a spreading code for correlating with a received spread signal (Fig. 11, block 84 "PN code generator, PN code supplied to multiplier 821 multiplied (correlated) with reception signal, column 11, lines 5-7); a correlation value computing section which computes a correlation value between the spread signal and the spreading code output from said spreading code generating section (see Fig. 11, combination of elements 821 (multiplier), 822 (integrator), 823 (power converter), column 11, lines 5-14); a data signal demodulating section (Fig. 11, combination of blocks 81, 82, 83 corresponding to the claimed data signal demodulating section) which detects a peak of an output from said correlation value computing section and demodulates a data signal on the basis of the detected peak (Fig. 11, elements 82, 825 that control switch 826, column 11, lines 19-23, where the detected peak corresponds to the correlation value being larger than the threshold, see column 12, lines 11-24) ; a peak signal detecting section which detects the peak of the output from said correlation value computing section (Fig. 11, element 82) and a spreading code generation control section which changes a shifting direction of the spreading code relative to the spread signal every time a peak is detected by said peak signal detecting section (see column

11, lines 61-67, through column 12, lines 1-24, shift in lag direction or leading direction of the PN code, every time clock tracking mode is performed).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et. al., (U.S. 5,940,432) in view of Hiramatsu et. al., (U.S. 5,031,191).

With respect to claim 66, Saito et. al., do not expressly teach: a filter which passes only a signal component, of a signal output from said data signal demodulating section, which falls within a data frequency band.

In the same field of endeavor (spread spectrum demodulators) Hiramatsu et. al., disclose: a filter which passes only a signal component, of a signal which falls within a data frequency band (see Fig. 1, BPF signal 110, function of band pass filter is to pass signal which falls within a data frequency band).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the system of Saito based on the teachings of Hiramatsu et. al., so that it includes a filter which passes only a signal component, of a signal output from said data signal demodulating section, which falls within a data frequency band, so that

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only a signal of interest is retained (by the BPF) and unwanted signal frequencies are filtered out.

6. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et. al., (U.S. 5,940,432) in view of Uchida et. al., (U.S. 6,366,603).

With respect to claim 67, Saito et. al., do not expressly teach: further comprising demodulation means for demodulating a data signal by counting peaks of outputs from said correlation value computing section in place of said data signal demodulating section.

In the same field of endeavor (spread spectrum communications), Uchida et. al., disclose: demodulation means for demodulating a data signal by counting peaks of outputs from said correlation value computing section (column 3, lines 9-27, see Fig. 1, blocks within dashed lines and demodulator 21 and Fig. 6 process described in column 8, lines 43-67, through column 9, lines 1-16).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the system of Saito et. al., based on the teachings of Uchida et. al., so that it includes demodulation means for demodulating a data signal by counting peaks of outputs from said correlation value computing section in place of said data signal demodulating section, so that communication is performed by merely counting the number of correlation peaks before data demodulation, so that high speed media access is performed even under unfavorable electric-wave environment (Uchida et. al., column 3, lines 23-27)

Allowable Subject Matter

7. Claims 2,3,42-44, 10-11, 45-47, 27-28, 57-59, 29-30, 60-62, 31-32, 63-65, 5,6, 12-13,48-50, 14-15, 51-53, 16-17, 54-56, 18-20, 33-35, 21-23, 36-38, 24-26 are allowed, for the reasons indicated in the previous Office Action (10/30/07).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SOPHIA VLAHOS whose telephone number is (571)272-5507. The examiner can normally be reached on MTWRF 8:30-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SOPHIA VLAHOS/
Examiner, Art Unit 2611
3/19/2008

/Mohammad H Ghayour/

Supervisory Patent Examiner, Art Unit 2611